

Forecast for GMAP Campaign in Mead, NE**Forecast Area: AltEn, 1332 County Rd 10, Mead, NE 68041****Forecast Valid For:** Wednesday September 15, 2021**Forecast Prepared On:** Tuesday September 14, 2021**Prepared By:** Melissa Sheffer, Meteorologist, R5-ARD-APB-CSS**Summary:**

Surface high pressure will move into the area on Wednesday and will bring with it southerly winds and warmer temperatures.

Mixing Heights: Mixing heights will be very low (200 – 300 feet) at the start of monitoring on Wednesday due to a surface temperature inversion. This will limit atmospheric mixing and create poor dispersion conditions. The inversion is predicted to break around 11:00 AM, at which point mixing heights will increase through the afternoon to a maximum height of 4,500 feet. After 5:00 PM, mixing heights will start decreasing rapidly and reach a minimum height of 400 feet by 8:00 PM.

Winds: Winds will be light/calm and variable from 6:00 – 8:00 AM. Starting at 9:00 AM winds will then be from the south and south-southeast throughout the rest of the day on Wednesday. Wind speeds will range from 2 to 10 mph with the highest wind speeds occurring during the afternoon.

Precipitation: No precipitation is anticipated for Wednesday. There will be periods of mostly cloudy to overcast skies throughout the day.

Temperatures: Temperatures will be in the low 50°F's at the start of monitoring on Wednesday morning and maximum temperatures on Wednesday afternoon reaching 80°F. Dewpoints will be between 54 and 60°F.

HYSPLIT Model Results: The HYSPLIT Dispersion Model predicts that modeled emission plumes from the facilities will disperse to the west early on Wednesday morning and then to the northwest the rest of the day.

Note: The images generated by the HYSPLIT Dispersion Model are not intended to predict concentrations. The images are intended to show where plumes are predicted to disperse. These are predictions and may not reflect observed conditions.

AltEn, Mead, NE from 6:00 AM – 7:00 PM CDT (11:00 – 00:00 UTC):

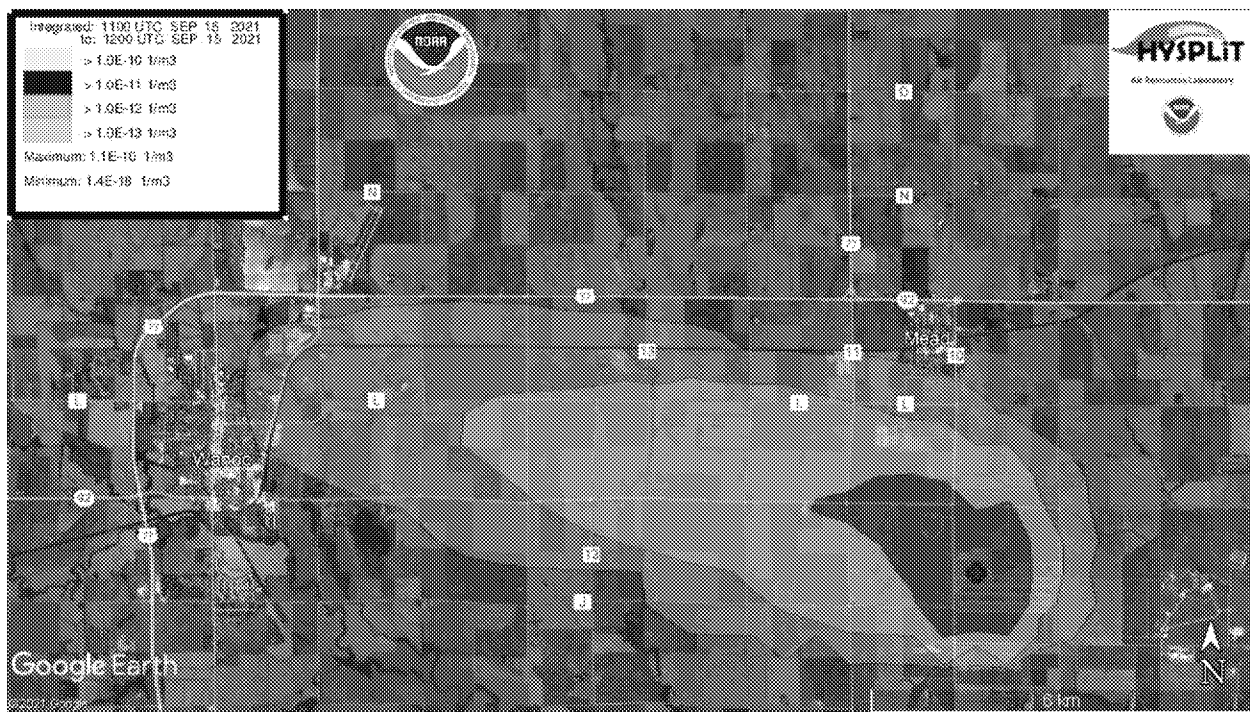


Figure 1: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 6:00 – 7:00 AM Central (11:00 – 12:00 UTC)

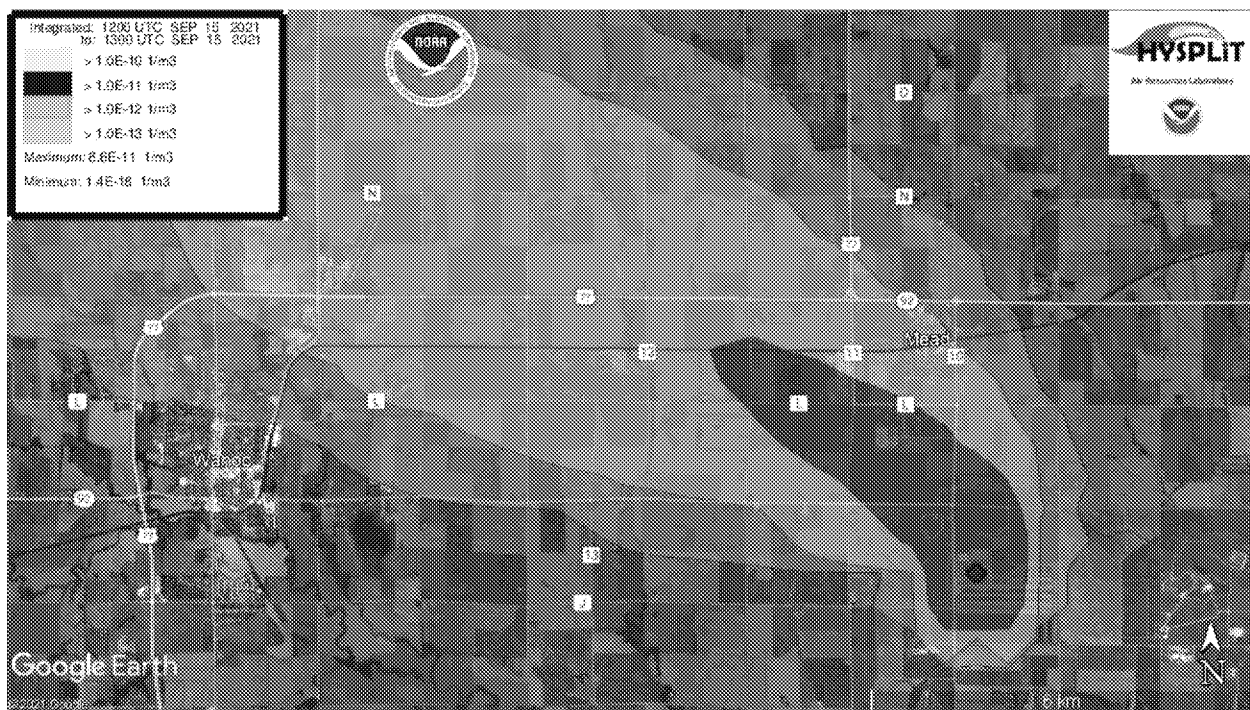


Figure 2: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 7:00 – 8:00 AM Central (12:00 – 13:00 UTC)

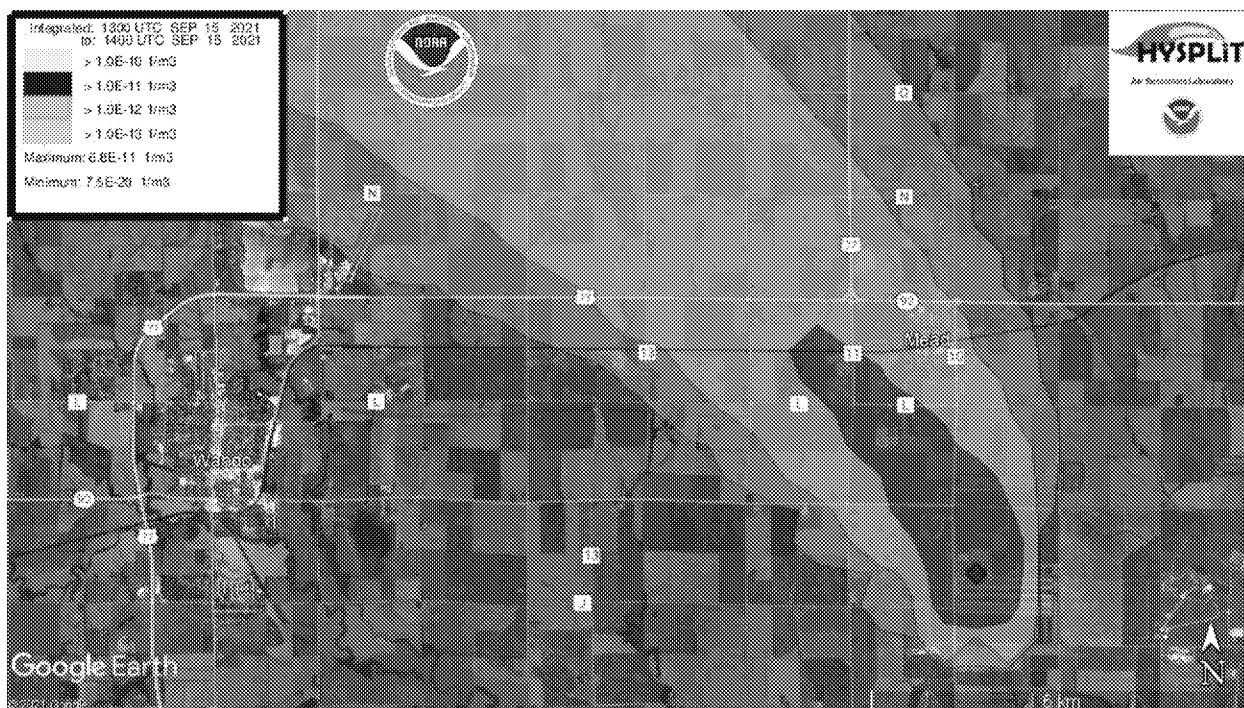


Figure 3: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 8:00 – 9:00 AM Central (13:00 – 14:00 UTC)

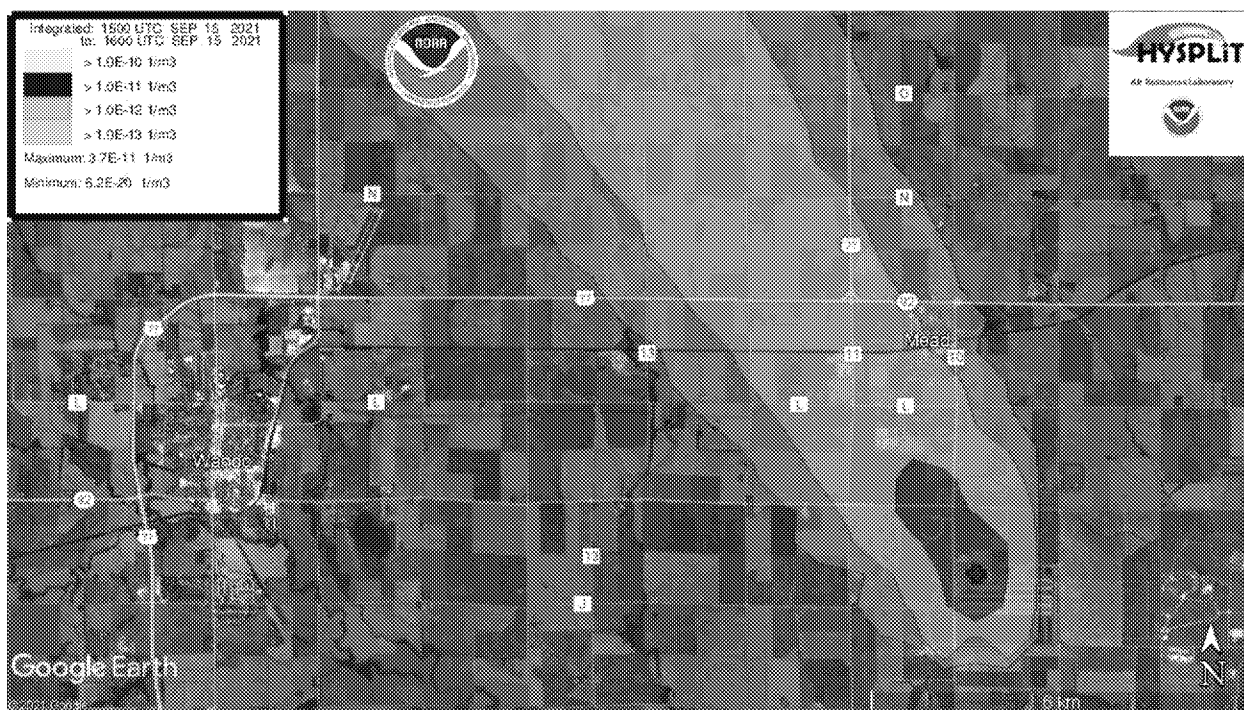


Figure 4: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 10:00 – 11:00 AM Central (15:00 – 16:00 UTC)

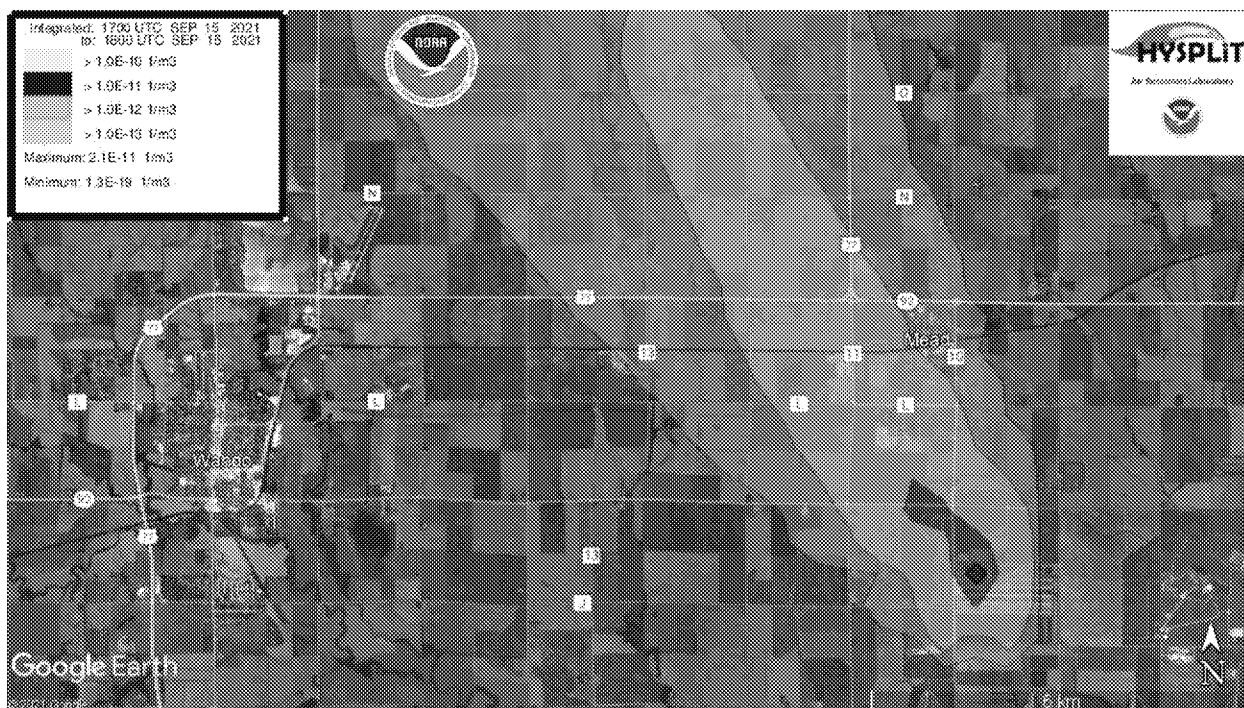


Figure 5: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 12:00 – 1:00 PM Central (17:00 – 18:00 UTC)

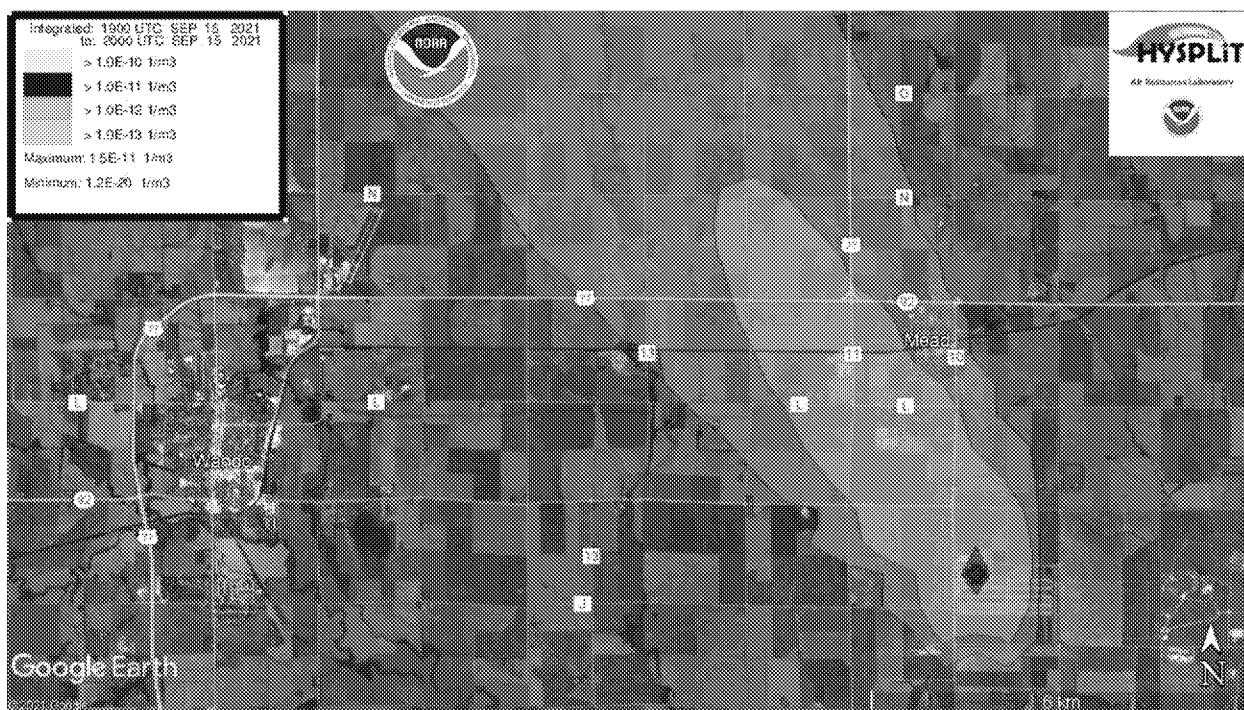


Figure 6: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 2:00 – 3:00 PM Central (19:00 – 20:00 UTC)

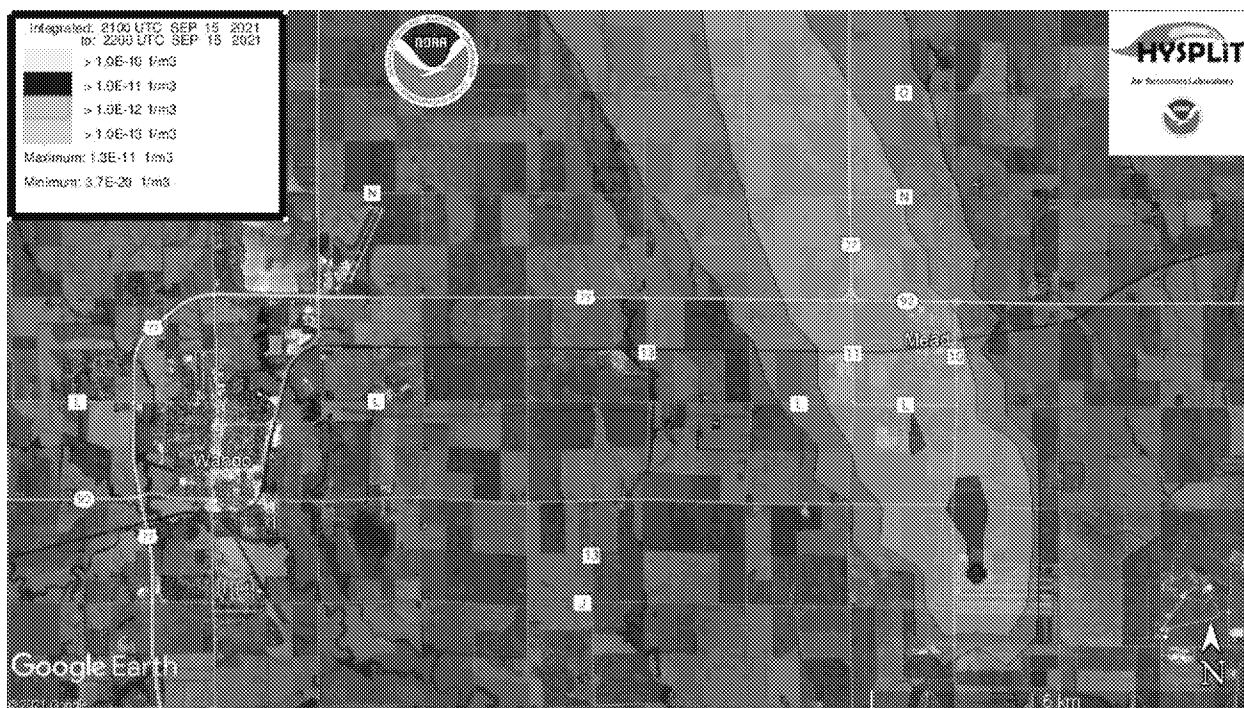


Figure 7: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 4:00 – 5:00 PM Central (21:00 – 22:00 UTC)

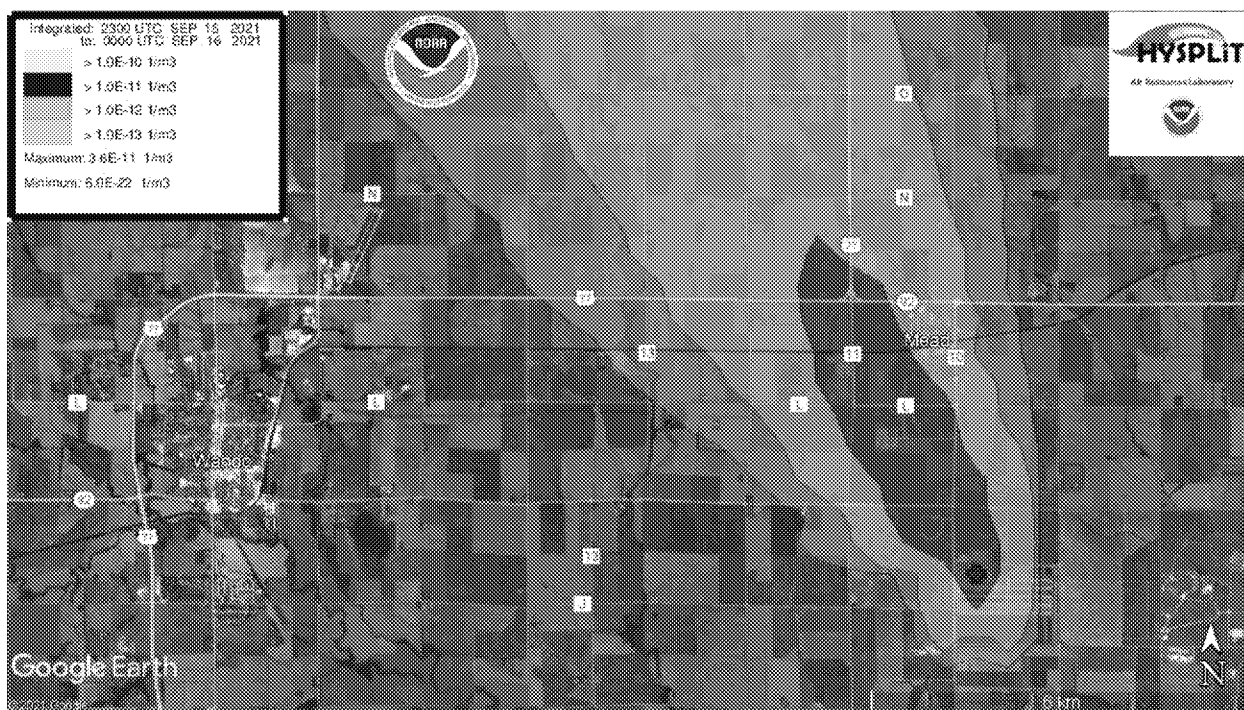


Figure 8: HYSPLIT Plume Dispersion for Wednesday September 15, 2021 from 6:00 – 7:00 PM Central (23:00 – 00:00 UTC)